WHAT IS CLAIMED IS:

1. An image forming apparatus for forming an image based on input image data, the image forming apparatus comprising encryption and decryption means that encrypts image data using an encryption key prior to the storage of the input image data onto image storage means, and decrypts the encrypted image data subsequent to the reading of the encrypted image data from the image storage means.

2. The image forming apparatus according to claim 1, further comprising non-volatile storage means for storing the encryption key, wherein the encryption and decryption means temporarily stores the encryption key, sent from the non-volatile storage means, in a temporary storage unit therewithin when the image data is stored onto the image storage means and/or when the encrypted image data is read from the image storage means.

3. The image forming apparatus according to claim 2, wherein the encryption and decryption means and the non-volatile storage means are arranged in separate units.

4. The image forming apparatus according to claim 1, further comprising encryption key generating means

for generating a random number and producing the
encryption key that contains at least a portion of the
generated random number.

5   5.   The image forming apparatus according to claim
2, further comprising encryption key generating means
for generating a random number and producing the
encryption key that contains at least a portion of the
generated random number.

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           6.   The image forming apparatus according to claim
2, further comprising encryption key compression and
decompression means for compressing and/or decompressing
the encryption key using a predetermined compression and
15   decompression method,
           wherein the compressed encryption key is stored
onto the non-volatile storage means and when the
encryption key is used, the compressed encryption key is
read from the non-volatile storage means.

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           7.   The image forming apparatus according to claim
4, further comprising encryption key compression and
decompression means for compressing and/or decompressing
the encryption key using a predetermined compression and
25   decompression method,
           wherein the compressed encryption key is stored
onto the non-volatile storage means and when the
encryption key is used, the compressed encryption key is

read from the non-volatile storage means.

8. The image forming apparatus according to claim 5, further comprising encryption key compression and decompression means for compressing and/or decompressing the encryption key using a predetermined compression and decompression method,

wherein the compressed encryption key is stored onto the non-volatile storage means and when the encryption key is used, the compressed encryption key is read from the non-volatile storage means.

9. The image forming apparatus according to claim 6, wherein the encryption key compression and decompression means applies an image compression and decompression unit for compressing and/or decompressing the image data.

10. The image forming apparatus according to claim 7, wherein the encryption key compression and decompression means applies an image compression and decompression unit for compressing and/or decompressing the image data.

11. The image forming apparatus according to claim 8, wherein the encryption key compression and decompression means applies an image compression and decompression unit for compressing and/or decompressing

the image data.

12. An image forming apparatus for forming an image based on input image data, the image forming
5   apparatus comprising:
input means for capturing a key value of an encryption key input by a user during the setting of the encryption key;
key value determining means for determining whether
10   key values input by the user by a predetermined number of times match each other;
non-volatile storage means for storing the key value input as an encryption key if the key value determining means determines that the key values match
15   each other; and
encryption and decryption means for encrypting the image data using an encryption key prior to the storage of the input image data onto image storage means, and for decrypting the encrypted image data subsequent to
20   the reading of the encrypted image data from the image storage means.

13. The image forming apparatus according to claim 12, further comprising display means for displaying the
25   key value captured by the input means, and converting an input key value into a form having no specific meaning.

14. The image forming apparatus according to claim

13, wherein the display means divides the key value of M digits on an N digits by N digits basis (M being greater than N), and converts a part of the key value of the N digits into a form having no specific meaning as soon as

5   the inputting of the key value of the part of the N digits is completed.

15. The image forming apparatus according to claim 12, wherein the inputting and displaying of the key

10   value is performed in one of a decimal format and a hexadecimal format.

16. The image forming apparatus according to claim 13, wherein the inputting and displaying of the key

15   value is performed in one of a decimal format and a hexadecimal format.

17. The image forming apparatus according to claim 14, wherein the inputting and displaying of the key

20   value is performed in one of a decimal format and a hexadecimal format.

18. A method for inputting the setting of an0 encryption key for use in the encryption of image data,

25   the encryption key being used to store input image data in image storage means, the method comprising the steps of:

capturing key values of the encryption key input by

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a user;

determining whether the key values input by the user by a predetermined number of times match each other; and

5   storing, in non-volatile storage means, the input key value as the encryption key when the key values match each other in the key value determining step.

19.   The method according to claim 18, further

10   comprising a step for displaying the key value captured in the capturing step, and for converting an already input key value into a form having no specific meaning.